

PERIOPERATIVE SERVICES EFFICIENCY: IMPROVING PATIENT THROUGHPUT

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12/14/12

Parent A3: Improving Patient Throughput

Define

Measure

Analyze

Improve

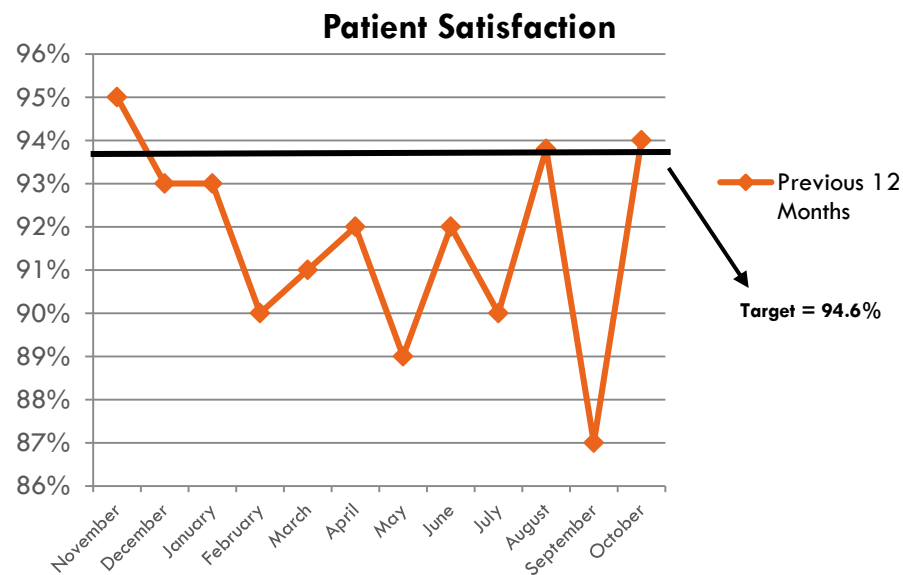
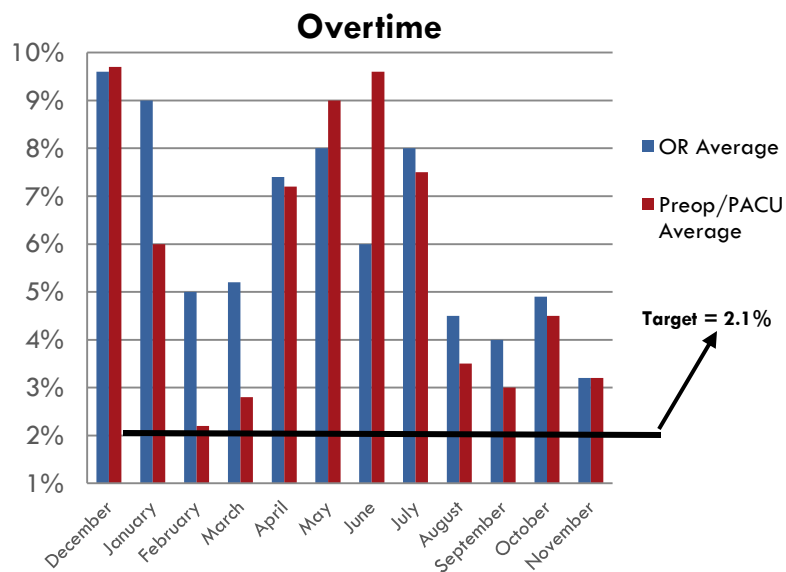
Control

ISSUE

Perioperative delays resulting in 22.3% worked hours in overtime and decreased patient, staff and physician satisfaction.

BACKGROUND

- The OR is currently experiencing turnover times, first case delays & room to incision times that exceed the health system standard.
- Delays negatively impact patient, staff & physician satisfaction. It increases cost due to overtime & on call hours worked & limits ability to increase surgical volume.
- The hospital is looking to increase surgical volume and needs to strengthen their ability to improve current workflows & respond to future growing demand.



Define

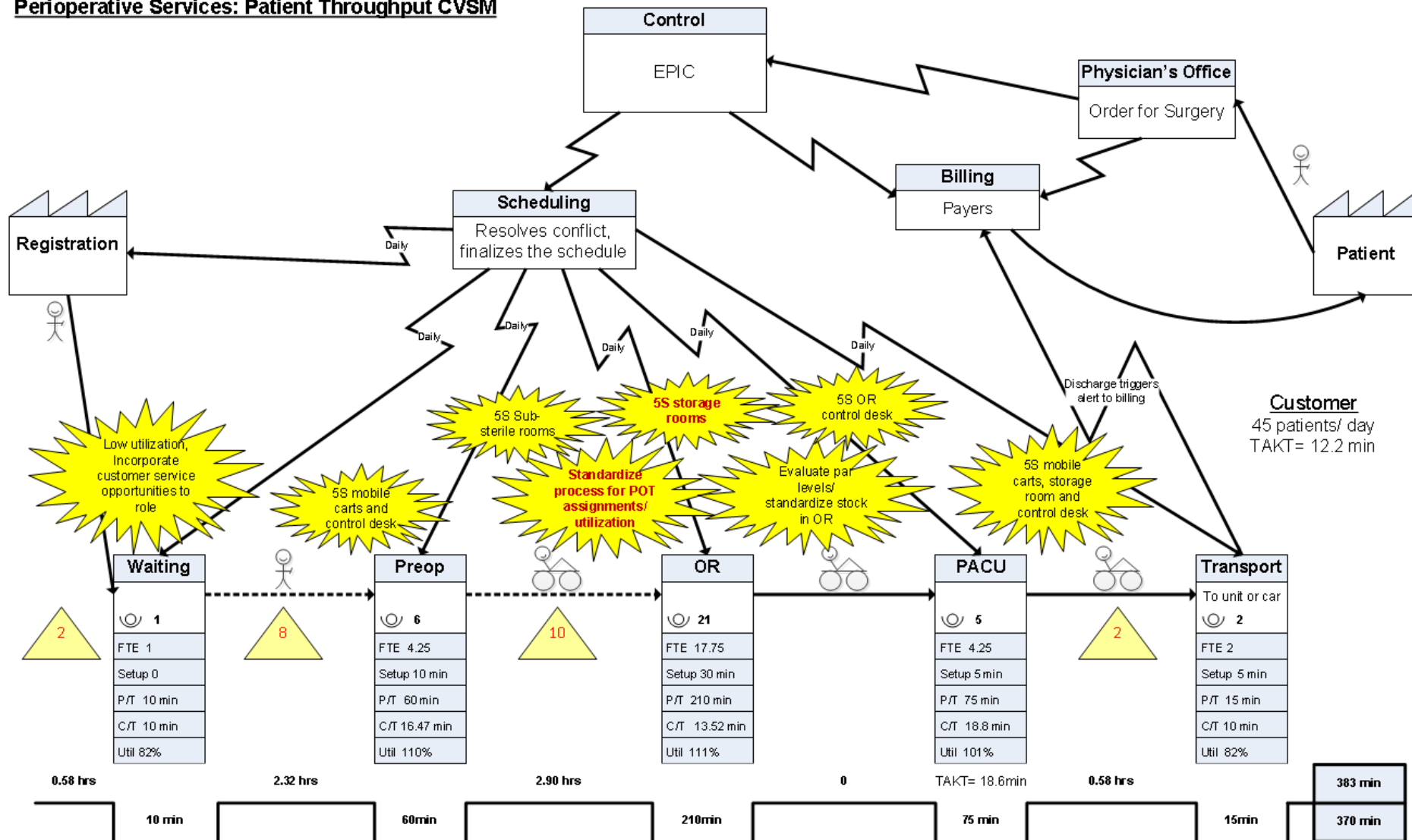
Measure

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Control

Perioperative Services: Patient Throughput CVSM



Define

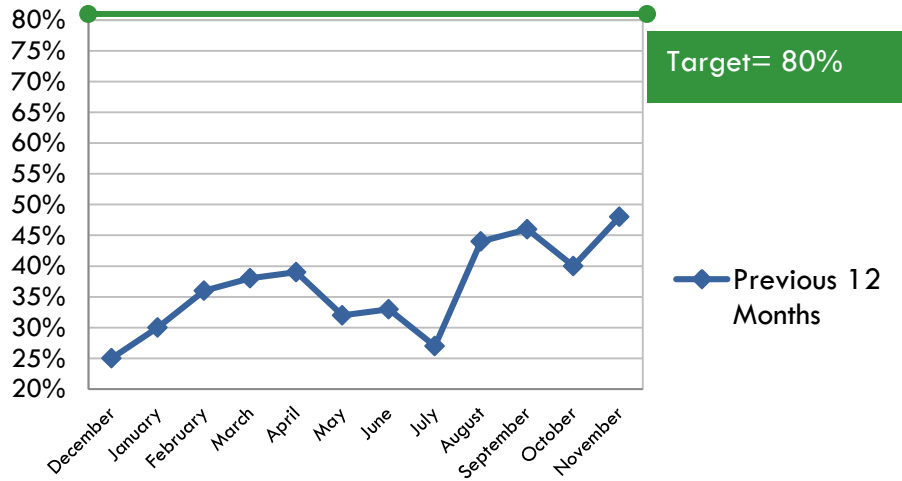
Measure

Analyze

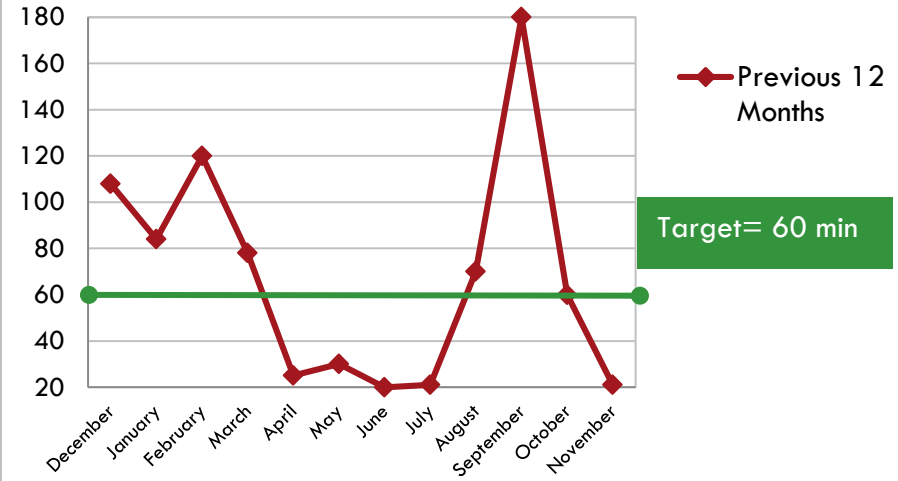
Improve

Control

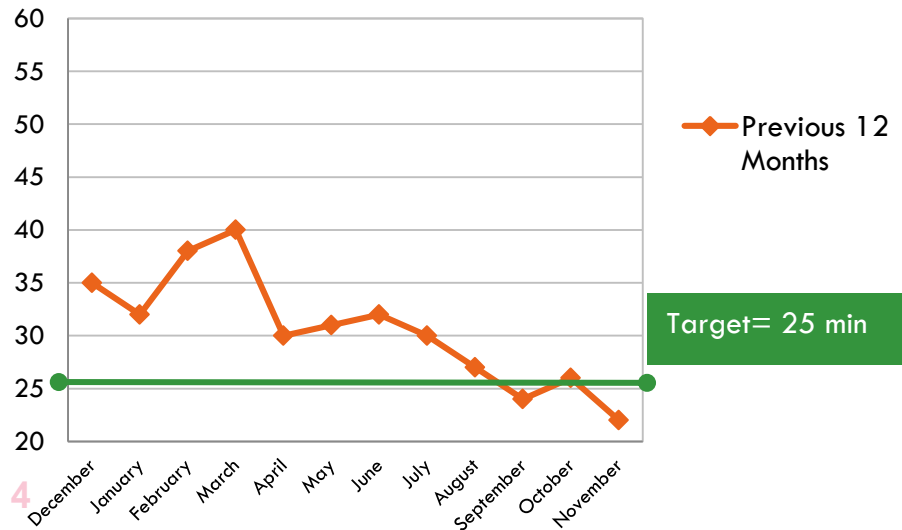
% On-Time First Case Starts



PACU Discharge to Out (min)

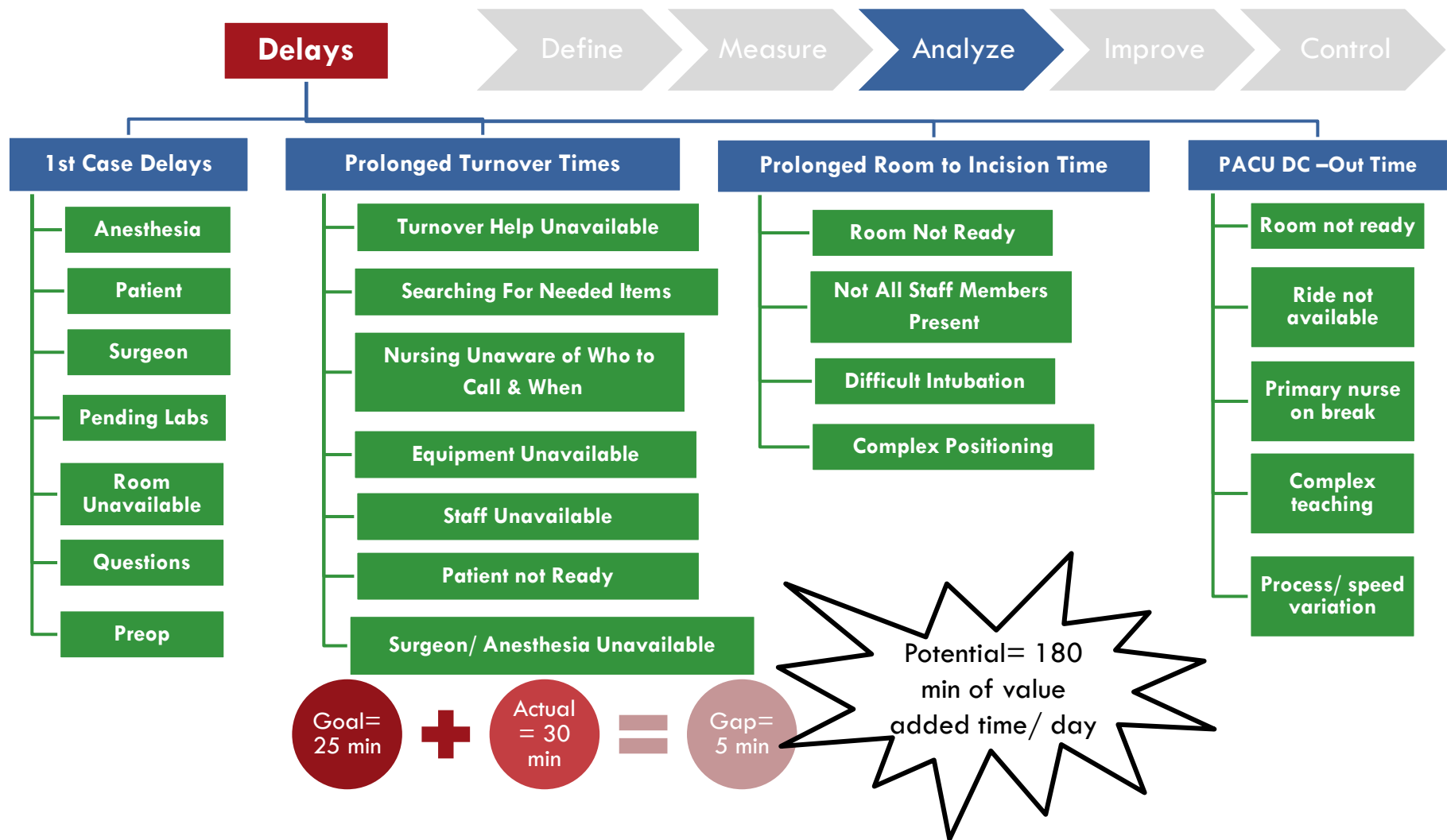


Turnover Time (min)



Room to Incision Time (min)





TARGET CONDITION

- Match appropriate resources to services provided to balance utilization and achieve efficient, effective, high quality patient care
- Achieve top decile status in patient satisfaction (ASU 95%)
- Achieve top decile for job satisfaction by 2016 with a mean score of 80
- Improve financial performance by minimizing overtime to meet/ exceed target



COUNTERMEASURES

- Establish a safe and organized workplace with visual control
- Create standard work instructions
- Focus on Room Turnover Process

IMPLEMENTATION PLAN

1. Value Stream Mapping Workshop	Periop PI Workgroup	1/12/2012
2. Go to Gemba: Establish Overall Current State	Periop PI Workgroup	1/26, 2/9, 2/16, 2/17/2012
3. 5S Workshop	Periop PI Workgroup	3/8/2012
4. Go to Gemba: Identify 5S Opportunities	Periop PI Workgroup	3/15, 3/22/2012
5. Project Overview	Senior Leadership/ Mgmt Engineering	4/23/2012
6. Kaizen: 5S 2 nd Floor Storage Room	Periop PI Workgroup	4/3/2012
7. Project Overview	OR Committee	5/4/2012
8. Go to Gemba: Establish Current State Turnover	Periop PI Workgroup	5/21, 5/24, 6/12/2012
9. Standard Work and Balancing Workshop -Periop Tech Room Prep Worksheet	Periop PI Workgroup	6/8, 6/11, 7/6, 7/19/2012
10. Visual Management Workshop -Visual Board Preop - Visual Turnover Baord OR	Periop PI Workgroup	10/4, 10/10, 10/11/2012
11.Kaizen: 5S Periop Tech Workroom	Periop PI Workgroup	10/19/2012
12. Standard Work: Turnover Process	Periop PI Workgroup	10/25, 11/2, 11/19/2012 &ongoing
13. Hoshin Plan Workshop	Senior Leadership	

CONTROL

Ongoing Measurement	Frequency	Target	Method
Customer Satisfaction	Daily	94.6%	Discharge Phone Calls
Staff Satisfaction	Daily	90%	Daily Rounding/ Staff Meetings
Overtime	Weekly	2.1%	Staffing Report
Utilization Rates	Weekly	Balanced Load	Evaluate Productivity. Discuss at Staff Meetings.

Baby A3: Improving room Turnover

Define

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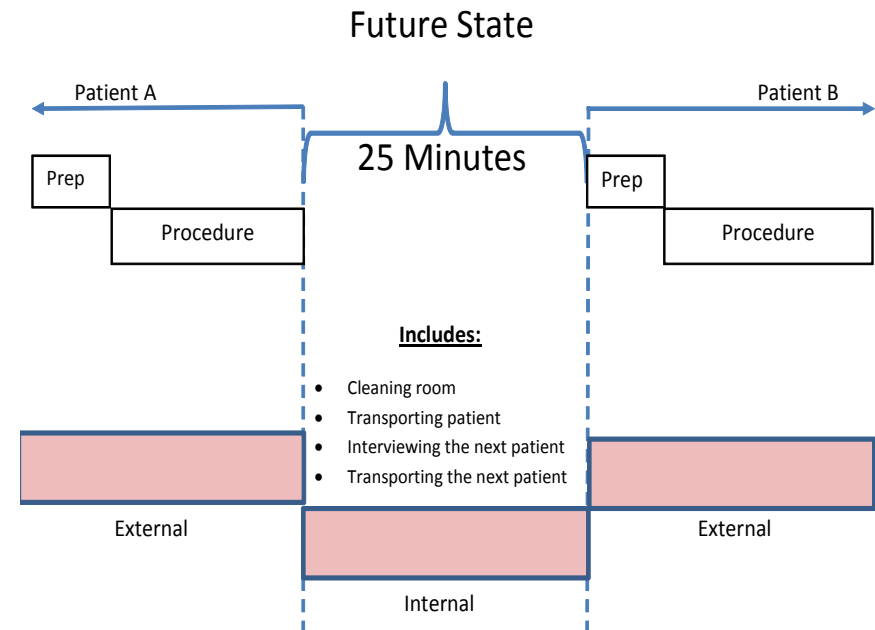
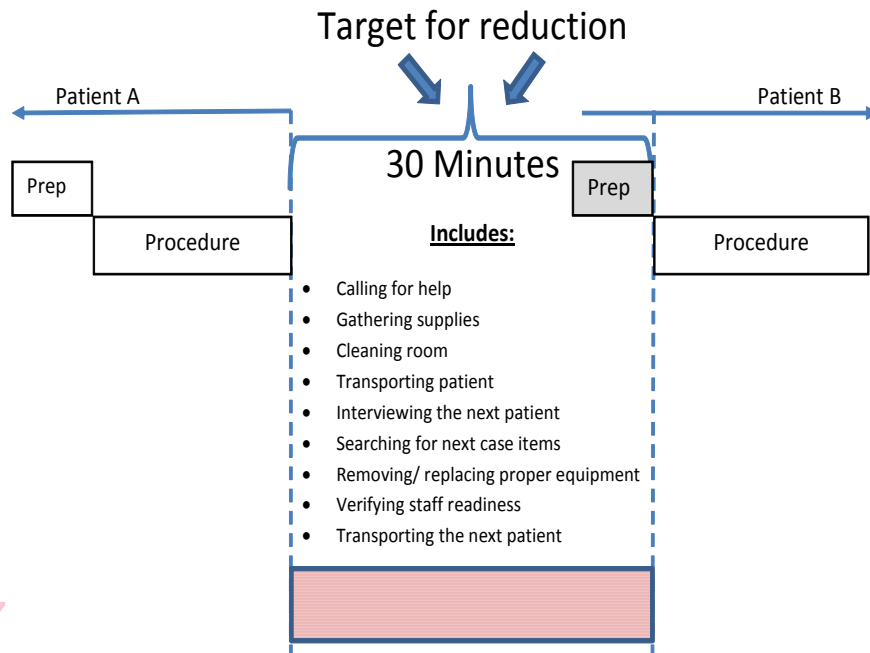
ISSUE

OR turnover times are exceeding the Health System target by 5 minutes per turnover (totaling 3 hours of potential value added time per day), 67% of the time. This is significantly contributing to Perioperative delays.

BACKGROUND

The OR is currently experiencing turnover times that exceed the health system standard. Turnover delays result in the loss of valuable OR time, dissatisfaction by patients, families, surgeons, anesthesia staff, nursing and support staff. They can also cause disruption to the entire OR schedule, as well as additional staff overtime.

CURRENT CONDITION



Define

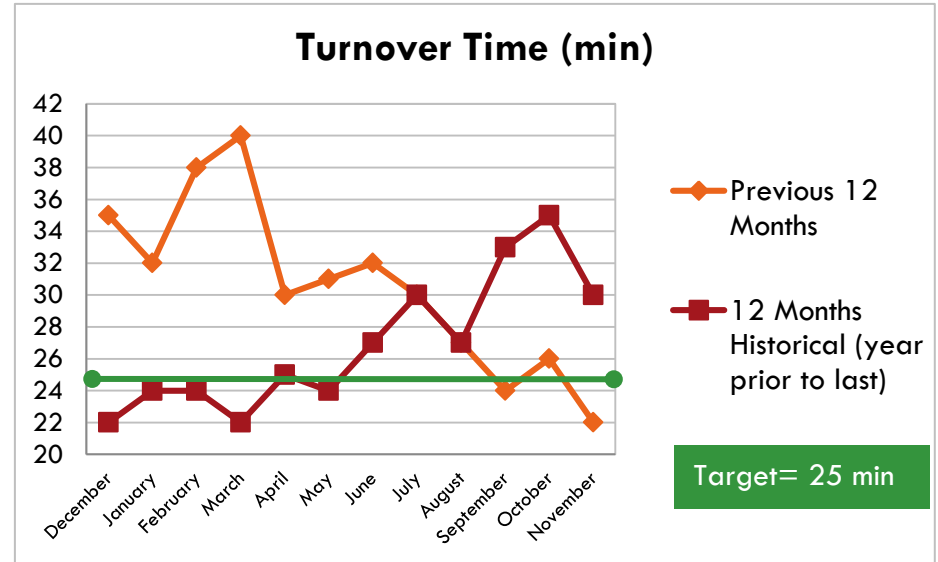
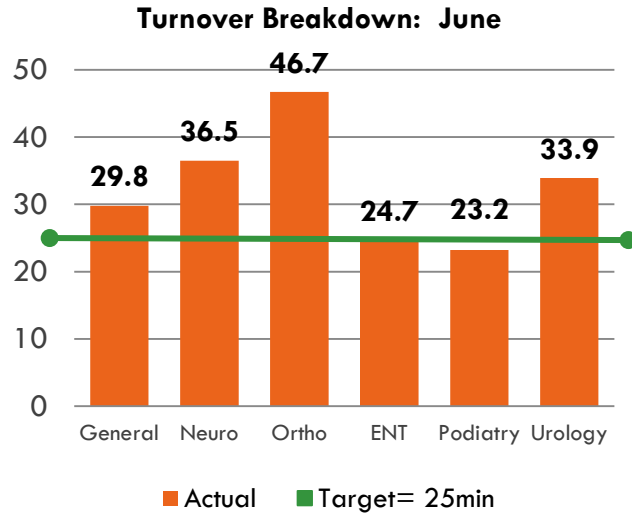
Measure

Analyze

Improve

Control

Measure



PROBLEM ANALYSIS



- ❖ 1,350 minutes/ day is spent getting the operating rooms ready for the next surgery
- ❖ This is 21% of the total available time/ day



COUNTERMEASURES

- Develop standard work for room turnovers/ room prep
- Improve compliance of standard communication during the sign-out; to include potential delays, barriers, and team member point of contact between cases (involving ALL team members).
- Evaluate space for potential 5S opportunities to optimize the availability of frequently used items between cases.

Action Plans		Benefit
5S PACU Storage Room 5S 2 nd Floor Storage Room 5S Periop Tech Workroom Visual Boards Preop & Turnover OR	<ul style="list-style-type: none"> • Expose Waste by Enhancing Visual Management • Simplify Training • Increase Efficiency • Improve Staff Satisfaction 	<ul style="list-style-type: none"> • Motion • Overproduction • Inventory • Defects • Waiting
Gemba: Turnover/ Room Prep Process	<ul style="list-style-type: none"> • Bring Clarity to a Complex Process • Highlight non-value Added Processes 	<ul style="list-style-type: none"> • Defects
Standard Work/ Balancing Workshop Periop Tech Room Prep Turnover Process Daily Huddles	<ul style="list-style-type: none"> • Provides Clearly Defined Roles • Facilitates Consistent Training • Decreases Errors • Establishes Virtual “Roster Stability” • Increases Efficiency 	<ul style="list-style-type: none"> • Motion • Overproduction • Inventory • Defects • Waiting

Control:

	Frequency	Target	Method
Staff Accountability/ Ownership	Daily	100% utilization	Audit Daily Accountability Board
Following Standard Work	Daily	100% utilization	Gemba/ Observation of Daily Huddle/ Weekly Meeting
Staff Satisfaction	Daily	90%	Staff feedback, NDNQI results, discussion during huddles

Target Condition: Tier 1

Audience: All unit front line staff:
(led by "team lead"...position rotated weekly)

Define

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Control

- Charge nurse
- Staff nurses
- PCAs
- UCAs
- Sitters
- Nursing students/ instructors

Workplace of Choice

GOAL:

Achieve top decile for job satisfaction by 2016 with a mean score of 80..

Suggestions for improvement

To be determined, NDNQI results due in August

Quality

GOAL:

Improve clinical outcomes by reducing harm to patients and meet top decile performance on publicly reported measures, ongoing.


Antibiotic Start Times 

Infection Rates 

Productivity & Efficiency

GOAL:

Match appropriate resources to services provided to achieve efficient, effective, compassionate care, ongoing.


First Case Delays 

Turnover Times 

Financial Performance

GOAL:

Generate positive financial margin to fund continued investment in capital & academic mission, ongoing.

of cases 


Overtime 

Service & Reputation

GOAL:

Achieve top decile status in patient satisfaction by 2012.

Service Recovery 


Discharge Phone Calls 

Innovation & Strategic Growth

GOAL:

Increase & continue UHE nursing based research & educational initiatives, ongoing.

Clinical Ladder 

Current Research Studies 

Improve: Tier 1



Potential Issue	Countermeasure	Description	Benefit
A. Lack of accountability	Identify the accountability for collecting the data	<ul style="list-style-type: none"> Performance tracking will be done daily by the staff member doing the work, completed between 6am-7am daily Accountability of these tasks will be visualized on the Daily Accountability Board, completed between 6am-7am daily The "team lead" for that week will be held accountable for collecting and updating the data, completed between 6am-7am daily. This position will be rotated weekly to involve all staff. 	↓ Inventory ↓ Overproduction ↓ Motion ↓ Defects ↓ Waiting ↑ Utilization of talent
B. Lack of follow-up/ resolution when problems arise (escalation protocol)	Identify the flow of resolution when problems occur		↓ Inventory ↓ Overproduction ↓ Motion ↓ Defects ↓ Waiting ↑ Utilization of talent
C. Lack of standard work	Develop standard work for the Tier 1 daily huddle	<p>"Team Lead" (position rotated weekly)- Daily Elements:</p> <ul style="list-style-type: none"> Lead the huddle Complete daily accountability board task assignments Update pareto charts Gemba walk with the Nurse Manager Report action plans/ follow-up items from huddle to the Nurse Manager <p>"Team Lead"- Multiple times a day elements:</p> <ul style="list-style-type: none"> Observe standard work on the unit Update performance tracking Train staff as needed <p>Daily Huddle Standard Work:</p> <ol style="list-style-type: none"> Gather and update data for huddle, between 6am-7am. Huddle begins promptly at 7am, daily. Led by the "Team Lead" (Initially this will be the Charge Nurse or Unit Leadership Council Rep, until all front line staff have been trained to lead the huddle. Flow of conversation will follow a standard sequence, moving left to right on the board. Least experienced staff will be asked for feedback first. The leader will save comments/ feedback for last. The huddle will not exceed 12 minutes in length. Discussion items that need more detailed focus will be added to the parking lot, and added to the weekly staff meeting agenda. High priority items that need immediate action will be escalated to the appropriate Nurse Manager for further discussion, immediately following the huddle. The huddle will honor sterile communication. There will be no sidebar conversations or distractions. All participants will maintain an open minded and respectful attitude. 	↓ Inventory ↓ Overproduction ↓ Motion ↓ Defects ↓ Waiting ↑ Utilization of talent

Implementation Plan: Tier 1



Activity	Timeframe							Owner
	December 2012	January 2013	February 2013	March 2013	April 2013	May 2013	June 2013	
Team Training								Tier 2 participants
Write standard work for creating a visual management board (VMB)								Tier 2 participants
Determine location for the VMBs								Nurse Managers
5S current unit data/ message boards								Nurse Managers/ Unit Leadership Council
Determine the baseline for improvement, unit specific								Nurse Managers/ Unit Leadership Council
Develop the VMBs								Tier 1 participants
Develop the Daily Accountability Boards								Tier 1 participants
Write standard work for maintenance of the VMB								Unit Leadership Council
Write standard work for facilitating the daily huddle								Unit Nurse Manager
Implementation Date: First Unit T10								Unit Nurse Manager
Go to Gemba, observe daily huddles and receive training: N5								Unit Nurse Manager
Implementation: N5								Unit Nurse Manager
Go to Gemba, observe daily huddles and receive training: : T6								Unit Nurse Manager
Implementation: T6								Unit Nurse Manager
Go to Gemba, observe daily huddles and receive training: T5								Unit Nurse Manager
Implementation: T5								Unit Nurse Manager
Go to Gemba, observe daily huddles and receive training: PCU								Unit Nurse Manager
Implementation: PCU								Unit Nurse Manager
Go to Gemba, observe daily huddles and receive training: : ICU								Unit Nurse Manager
Implementation: ICU								Unit Nurse Manager
Go to Gemba, observe daily huddles and receive training: : ED								Unit Nurse Manager
Implementation: ED								Unit Nurse Manager
Go to Gemba, observe daily huddles and receive training: Periop								Unit Nurse Manager
Implementation: Periop								Unit Nurse Manager
Go to Gemba, observe daily huddles and receive training: : Talbot								Unit Nurse Manager
Implementation: Talbot								Unit Nurse Manager
Daily Leader Rounding: Gemba								Unit Nurse Manager

Kaizen A3: 5S PACU Storage Room

Define

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Control

ISSUE

Inefficient utilization of PACU storage room; resulting in decreased staff satisfaction and increased process times 2° to clutter, lack of defined item locations, multiple storage locations, frequently used items out of reach and excessive amounts of inventory.

BACKGROUND

The PACU storage room is currently being used for much more than its intent (patient care supplies). Often times equipment, wheelchairs, IV poles and patient belongings are crammed in this already tight space to avoid visual clutter in patient care areas. Current par levels exceed daily demand to enable a once a month evaluation of inventory levels.

CURRENT CONDITION



Results



Metric Results	Before 5S	After 5S	Value
# of storage spaces	4	1	Reduced by 3
Time spent searching	6 minutes	10 seconds	Gained 5 minutes 50 seconds
Staff Satisfaction	100% Dissat.	90% Sat.	100% Satisfaction
Supply Inventory	Over 1200 items	559 items	Reduced by 47%
Labor Savings			\$2,745 (based on each nurse going to the storage room once per patient...this most likely occurs more often)

COUNTERMEASURES

- Create one, organized, usable PACU storage room
- Reduce supply inventory
- Reduce time spent searching for needed items
- Find space for "other" items
- Utilize bar code scanning to monitor inventory

IMPLEMENTATION PLAN

1. Identify Storage Space for "other" items 04/09/2012
2. 5s PACU Storage Room 05/03/2012
3. Develop control plan May 2012